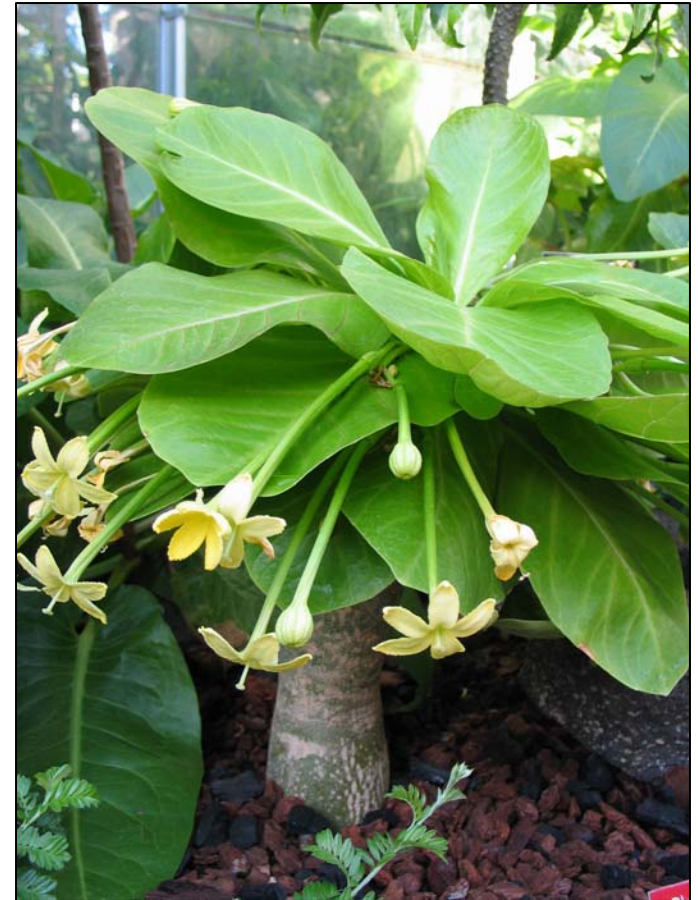


RARE & ENDANGERED PLANT HIGHLIGHT

BRIGHAMIA INSIGNIS

In the campanula family, this endangered plant is only found on the sea cliffs of the Na’Pali Coast and Ha’upu Ridge on the island of Kauai. Overgrazing, human development, and competition from invasive plants have reduced this species to less than twenty individuals.

The extinction of its only pollinator, the sphingid moth, has made it all but impossible for *Brighamia insignis* to reproduce on its own. Conservationists go to great lengths, repelling over steep cliff edges, to exchange pollen among plants and to collect seeds that can be grown and stored in botanical gardens and seed banks.



RARE & ENDANGERED PLANT HIGHLIGHT

WODYETIA BIFURCATA

The Foxtail Palm was largely unknown until 1978 when an Aboriginal man named Wodyeti shared his knowledge of its existence. Found only in a remote area of Queensland in northeastern Australia, the enormous demand for this newly described genus fueled illegal collection of wild plants and seeds and nearly decimated the few populations. Legal propagation eventually cooled demand for the wild-collected plants and today *Wodyetia bifurcata* is one of the world's most popular landscape palms.



The entire native population is protected within the Cape Melville National Park, where it appears to be successfully regenerating. The species is listed in the Nature Conservation Act (Queensland) 1994 and is still listed on the IUCN Red List.

RARE & ENDANGERED PLANT HIGHLIGHT

Gossypium tomentosum

Also known as Hawaiian cotton, *Gossypium tomentosum* was once extremely common to the dry and rocky coastal areas of the Hawaiian Islands. It now is threatened by coastal development and the spread of alien invasive weeds.



This plant is rare by all standards including ICUN, the World Conservation Union and due is also protected under the Endangered Species Act. Although closely related to commercial cotton, the fibers of *Gossypium tomentosum* have not been used to produce cotton on a large scale. Hawaiian cotton has been important in research and breeding programs aimed at producing disease resistance in commercial cotton. Native Hawaiians used the bright yellow flowers were used to make dye.

RARE & ENDANGERED PLANT HIGHLIGHT

HIBISCUS BRACKENRIDGEI

***Hibiscus brackenridgei*, the state flower of Hawai`i, is an endangered plant endemic to the Hawaiian Islands.**

Unfortunately, there are less than 60 plants in eight populations on the islands of Lana`i, Maui, and Hawai`i.

Threats that include development, overgrazing by livestock and feral animals, and competition from invasive weeds have contributed to the drastic reduction in the wild populations.

Measures being taken by conservationists to protect the remaining populations of *Hibiscus brackenridgei* include weed control, fencing to exclude animals, preservation of remaining intact habitat, and conservation of plants and seeds in botanical gardens and seed banks.



RARE & ENDANGERED PLANT HIGHLIGHT

ENCEPHALARTOS LEHMANNII

The Karoo cycad is endemic to the Eastern Cape in South Africa. Cycads are the oldest seed producing plants and according to fossil records predate dinosaurs. The few remaining wild populations of *Encephalartos lehmannii* are threatened by habitat destruction and unsustainable collection of plants for horticultural and medicinal uses.

Conservation of plant material in botanical gardens and seed banks, controlling trade in cycads, and protection of wild populations and habitat are being undertaken worldwide.



RARE & ENDANGERED PLANT HIGHLIGHT

ECHINACEA TENNESSEENSIS

***Echinacea tennesseensis*, or Tennessee coneflower, is known to exist naturally only in three locations around Nashville, TN. Smaller and less vigorous than purple coneflower, the Tennessee coneflower has short, more upturned ray flowers; spiny, coppery center disks with a green tinge; and a vertical rootstock. It performs well in partial shade, especially near cedar trees and where bedrock is near the surface.**



This coneflower has historically been rare with its habitat restricted to open sites with low competition. Prior to European settlement, forest “openings” were more common, likely maintained by fire and large grazing mammals. Neither forms of disturbance are a significant factor in modern times therefore acceptable habitat is greatly diminished.

RARE & ENDANGERED PLANT HIGHLIGHT

HIBISCUS CLAYI

Also known as Aloalo, *Hibiscus clayi* is an endangered tree endemic to the dry forests in the Nounou Mountains on the island of Kau'i. Today, in large part due to livestock grazing, development, and invasive plants there is only one naturally occurring population of four individual plants.



Habitat protection efforts and the propagation of plants by botanic gardens, such as NTBG, there is a slow increase in the numbers of plants found in forest preserves. Private landowners and public land managers are working to carefully manage recreational use of threatened habitats, livestock grazing, and invasive weeds.

RARE & ENDANGERED PLANT HIGHLIGHT

GAILLARDIA AESTIVALIS* *VAR. WINKLERI

Known commonly as Winkler's Gaillardia these plants are found in only one county in eastern Texas. This endangered species is extremely well-adapted to the dry conditions of its native habitat, the sandhills of the East Texas pineywoods, and could prove to be a wonderful garden plant. Development and fire suppression have threatened the survival of this endemic and rare species. Currently there are efforts to protect remaining habitat in and to study the effects of periodic controlled burning on threatened plant populations there.

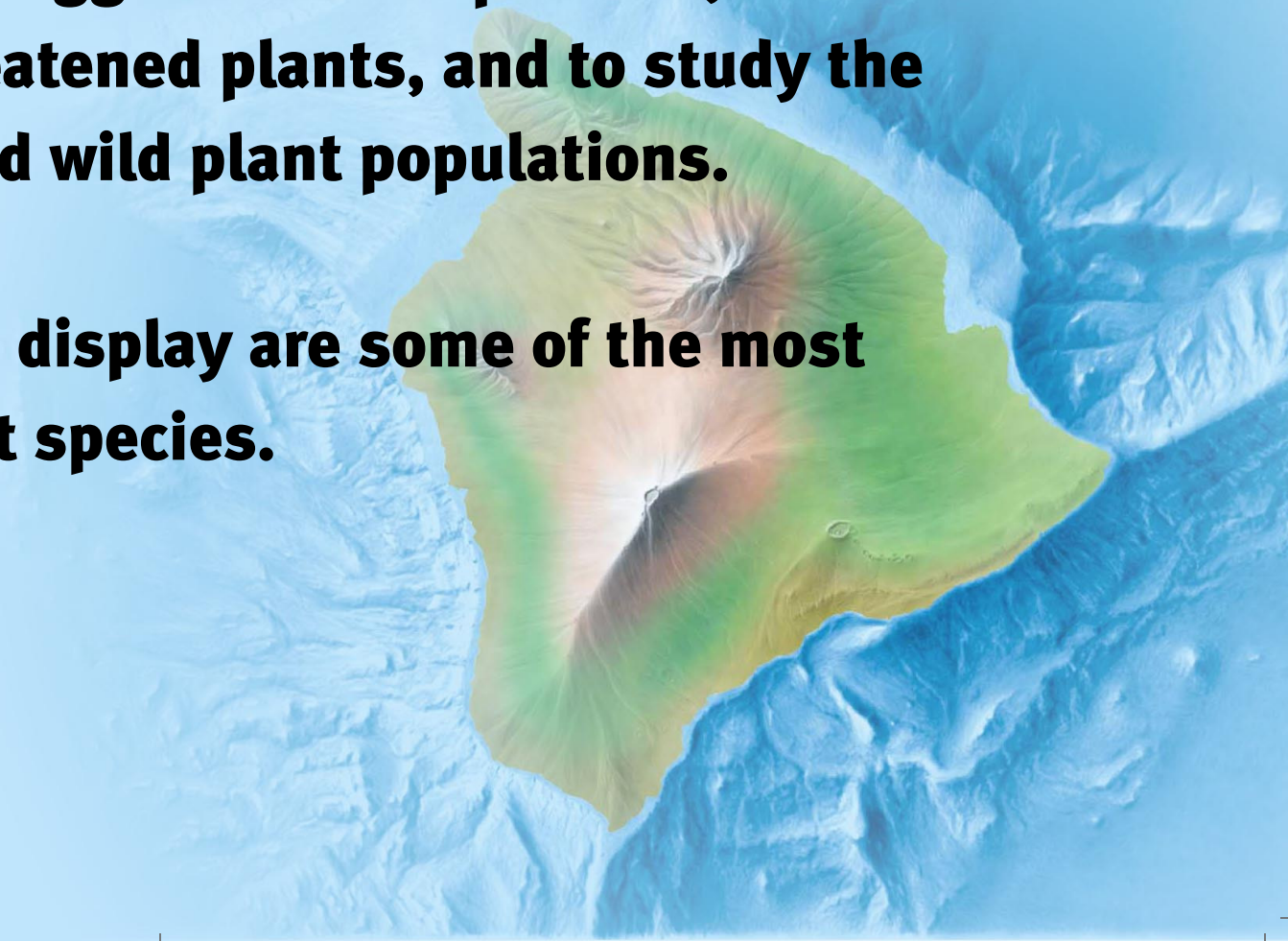


RARE & ENDANGERED HAWAIIAN PLANTS

More than one-third of the endangered plant species in the United States are native to the Hawaiian Islands. For millions of years, plants in Hawai`i evolved in benign isolation without competition from introduced species of plants and animals.

As a result of human inhabitation, however, invasive weeds, development, feral livestock, and rats present major threats to the survival of many Hawaiian plant species. Conservationists are working to control the aggressive competitors, to maintain off-site collections of threatened plants, and to study the conservation of threatened wild plant populations.

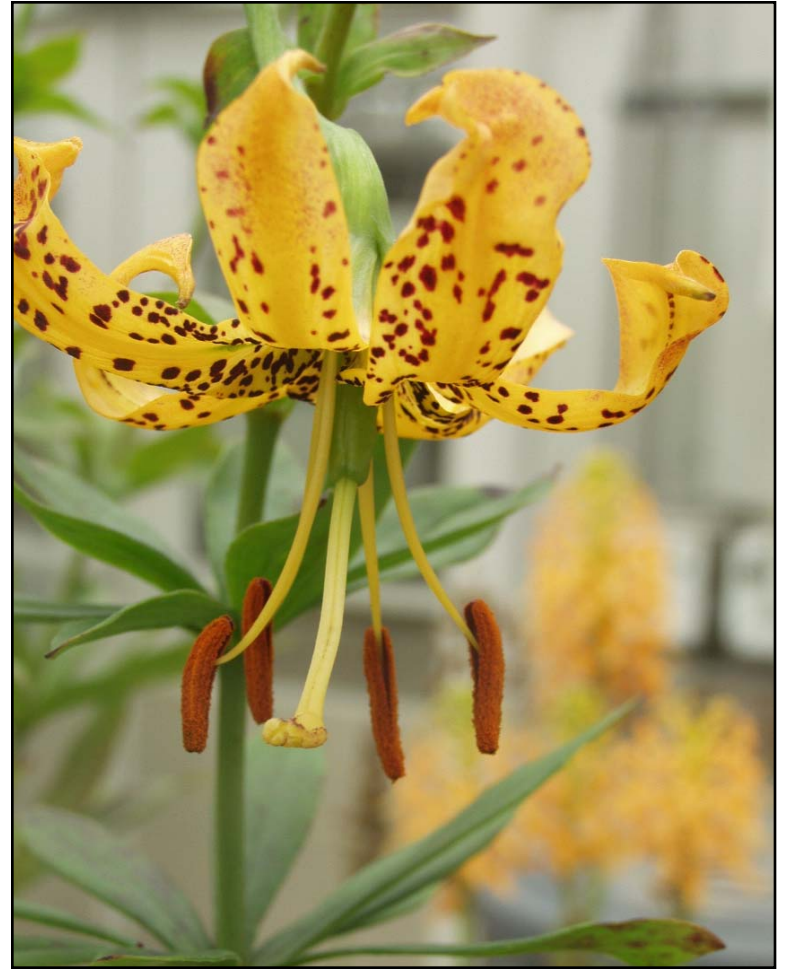
Many of the plants in this display are some of the most threatened Hawaiian plant species.



RARE & ENDANGERED PLANT HIGHLIGHT

LILIAM IRIDOLLAE

Lillium iridollae, also known as the Pot-of-Gold Lily, grows along streams in wet pine woodlands and in pitcher-plant bogs in the southeastern United States. The habitat of this endangered plant is dependent on periodic, naturally occurring fires caused by lightning strikes that reduce competition from other plants and release nutrients and organic matter from burned peat moss and leaves into the acidic, nutrient-poor soil. Its sensitivity to changes in drainage patterns and water quality make *Lilium iridollae* particularly vulnerable to disturbances in its ecosystem such as overgrazing by livestock and urban development in nearby areas.

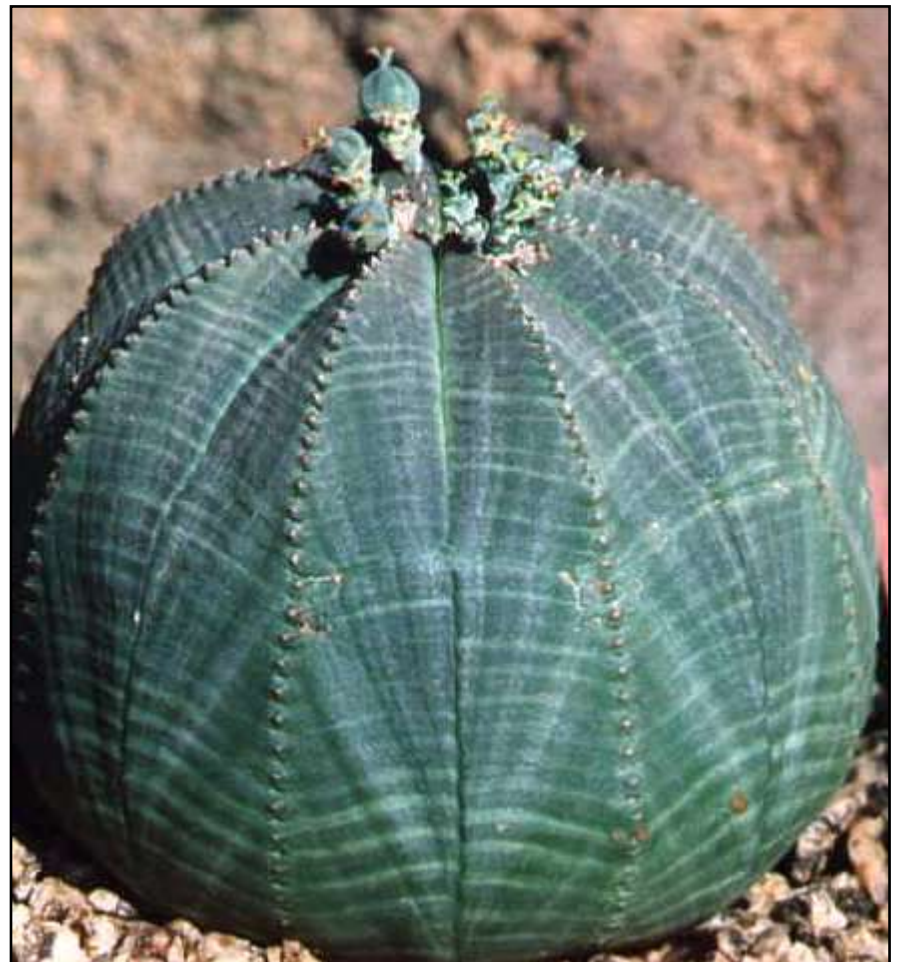


RARE & ENDANGERED PLANT HIGHLIGHT

EUPHORBIA OBESA

Also known as the baseball plant, *Euphorbia obesa* is found only in the Great Karoo region of South Africa. Unsustainable harvesting by collectors and plant exporters almost resulted in the plant becoming extinct. As a result national and international legislation have been enacted to protect the remaining populations.

While *Euphorbia obesa* remains endangered in its native habitat, it has become very common in cultivation. By growing large numbers of *Euphorbia obesa*, nurseries and botanical gardens have been working to ensure that specimens being traded and sold among plant collectors are not obtained from the wild, thus protecting it for posterity.



RARE & ENDANGERED PLANT HIGHLIGHT

MAMMILLARIA HAHNIANA

***Mammillaria hahniana* is commonly known as the old woman cactus because of the grayish hairs that protect it from the harsh sun common to its native habitat in the Mexican state of Guanajuato.**



Mexico is an important center of diversity for the Cactus Family, containing more than five hundred species and possessing the highest number of endemic and endangered cacti of any country in the world. Though wild populations of *Mammillaria hahniana* are still considered vulnerable, widespread propagation of this species by commercial nurseries catering to cactus hobbyists has greatly reduced the demand for plants collected from naturally-occurring populations.

RARE & ENDANGERED PLANT HIGHLIGHT

ALOE RAUHII

Aloe rauhii is a rare succulent plant native to the semi-desert of southwestern Madagascar, the world's fourth largest island. Madagascar is recognized as one of the world's most important centers of biodiversity and is home to five percent (5%) of the world's plant and animal species.

Because these plant species have evolved in relative isolation for millions of years, the flora of Madagascar is among the most unique and fascinating in the world. Eighty percent of Madagascar's plant species, including *Aloe rauhii*, are endemic, meaning that it occurs nowhere else in the world. Continued 'slash and burn' agricultural practices destroy both habitat and long term health of the nutrient poor soil. The resulting erosion then deposits huge quantities of sediment in islands rivers.



RARE & ENDANGERED PLANT HIGHLIGHT

PITCHER PLANTS

Take a look and notice that the flowers of pitcher plants or *Sarracenia* are quite different from the foliage. In early spring flowers emerge and later the new “pitchers” emerge. These are actually modified leaves that trap insects. Insects are attracted into the pitchers and are unable to exit due to a combination of slippery surfaces and tiny downward-pointing hairs that line the inside.

Sarracenia are found in damp nutrient poor soils throughout the southeast and gulf coast through the great lakes region into Canada. Threats to these plants include habitat loss, fire suppression, agriculture, development, and over-collection. *Sarracenia* are protected by the Endangered Species Act, CITES, and through inclusion on the IUCN Red List.

